

Section 4. Management

Without effective management, MPAs and MPA networks become “paper parks,” and their goals, objectives, and benefits are not achieved (Kelleher et al. 1995). In passing the MLPA, the California State Legislature cited a lack of clearly defined purposes and effective management for MPAs previously established in state waters. As a result, the Legislature found, “...the array of MPAs creates the illusion of protection while falling far short of its potential to protect and conserve living marine life and habitat” [FGC sub-section 2851(a)]. To remedy this, the Legislature called for an overall program that will “ensure that California’s MPAs have clearly defined objectives, effective management measures, and adequate enforcement, and are based upon sound scientific guidelines...” and that MPAs have “specific identified objectives, and management and enforcement measures” [FGC sub-sections 2853(b)(5) and 2853(c)(2)].

The initial focus for meeting the management requirements of the MLPA should be the preparation of regional management plans. Besides generally guiding day-to-day management, research, education, enforcement, monitoring, and budgeting, a management plan also distills the reasoning for key elements of the network that should be monitored, evaluated, and revised in response to new information and experience. Much of the material required to complete a management plan will be developed in the course of designing, evaluating, and establishing a regional proposal.

Regional management plans will not contain specific details for methodology, protocol or activities, but will provide a foundation for developing more specific action plans, as necessary, and for adapting management measures to new information. Management plans will include a schedule for review and possible revision at least every five years, and a mechanism for revisions in the interim in response to significant events, such as unexpected monitoring results, budget shifts, or changes in the status of the populations of focal species, habitats, or the character or effectiveness of management outside individual MPAs.

While the Department, and in some circumstances the California Department of Parks and Recreation, exercise primary authority for the management of California’s MPAs, these agencies can draw upon the capacity of other agencies and organizations in carrying out critical management activities. MPAs located adjacent to facilities such as onshore protected areas, marine labs, or similar such institutions may be effectively co-managed by the local management entities. A management plan should describe the potential management partners including various government agencies and non-government organizations and industry groups. Collaboration with non-governmental organizations, including among others non-profit conservation and education organizations, yacht clubs, and fishermen’s or recreational divers’ groups, can enhance implementation of important management activities, such as education, research, and monitoring.

Stakeholder advisory committees should continue to play a role in the management of MPAs in a region after completion of the design process, although other methods for engaging the public may be used. Some form of state-wide MPA advisory committee may also serve a valuable function to help ensure a continuing linkage between public and governmental participants as the MLPA is implemented throughout the state.

Structure of the Regional MPA Management Plans

Management plans typically have multiple objectives. Management plans:

1. summarize programs and regulations;
2. guide preparation of annual operating plans;
3. articulate visions, goals, objectives and priorities;
4. guide management decision-making;
5. guide future project planning (including funding needs);
6. ensure public involvement in management processes; and
7. contribute to the attainment of system goals and objectives (adapted from NOAA, 2002, p. 5).

Regional MPA management plans are envisioned to be working documents; plans should be readily accessible for reference and alteration. Retaining the plans' usefulness requires regular updates to incorporate new information from actual implementation, consistent with goals of adaptive management. To accomplish this, processes for review and revision when necessary are included.

In developing a regional MPA management plan, many basic questions arise. Why develop a plan? Who is it for? What does it hope to accomplish, and how does it propose to do so? Relevant issues may be grouped under the follow general headings:

1. Introduction (“*Why?*” and “*Where?*”)
 - a. Description of region
 - b. Regional design and implementation considerations
 - c. Regional goals, and objectives
 - d. Description of individual MPA boundaries (including maps), regulations, and objectives
2. General Activities and Locations (“*What?*” and “*Where?*”)
 - a. Scientific Monitoring and Research plan
 - b. Outreach, Interpretation and Education plan
 - c. Enforcement plan
 - d. Contingencies and Emergency Planning
3. Operations (“*How?*”)
 - a. Equipment and Facilities
 - b. Staffing
 - c. Collaborations and Potential Partnerships
4. Costs and Funding (“*How Much?*”)
 - a. Estimated costs
 - b. Potential funding sources
5. Timelines and Milestones (“*When?*”)
 - a. Timeline and Criteria for Implementation
 - b. Timeline for Evaluation and Review of Effectiveness

Description of Major Elements

1. *Introduction:* A regional MPA management plan begins with a clear definition of the region and specific considerations for design and implementation within the region. The description includes the regional goals and objectives adopted by that regions' stakeholder group. Boundaries of each individual MPA within the region are described along with the individual MPA objectives, and accompanying regulations. A concise list at the beginning of the plan of all characteristics relevant to the regional MPA network component and the individual MPAs will help managers determine what characteristic issues apply to the development and application of the regional MPA management plan. The MLPA Central Coast Regional Profile, completed in September 2005, provides much of this information for the central coast study region. It will be incorporated by reference within the regional MPA management plan. Future regional profiles should provide similar reference for the rest of the State.
2. *General Activities and Locations:* Management plans will describe general activities including; plans for scientific monitoring and research; outreach, interpretation and education activities; MPA specific enforcement plans; and contingency plans for management if current environmental or financial status changes dramatically. It is important to note that the assessment of activities specifies what is to be done in general, not who is to do it or specific protocols or methods.
 - a. *Monitoring and Research:* specifics on developing adaptive management and monitoring plans are found in Section 6.
 - b. *Interpretation and Education:* Strategies for outreach, interpretation, and education, although related, should be considered separately. Interpretation is an informal educational and communication process designed to help people enrich their understanding and appreciation of MPAs and their involvement with them. In contrast, education is broader and more holistic, imparting the knowledge and science of ocean and coastal resources and the role of marine protected areas in general to targeted audiences. Outreach includes both of the above along with materials designed to provide basic information on a broad scale to the general public.

Examples of interpretive activities include signs, dioramas, and docents for individual MPAs located either at shore stations adjacent to the MPA or at nearby embarkation points such as harbors or marinas. Educational activities might include organized field trips by K-12 classes or presentations to organizations, and are not as site-specific. General public outreach may include brochures, regulatory pamphlets and web-based information.

- c. *Enforcement:* Enforcement activities will vary depending on the final design, location, and regulations of individual MPAs. General enforcement concerns are discussed in Section 5. Regional management plans will contain specifics on necessary enforcement activities, equipment and staff for full implementation.

- d. **Contingency Planning:** The regional MPA management plan should identify risks specific to individual MPAs, measures that can minimize such risks, and plans for responding to them. Risks may include catastrophic pollution events, vessel groundings, or severe weather. Depending on the nature of the MPA, some of these risks will be more likely than others, and should be anticipated appropriately. Many such risks already may be the subject of contingency plans drawn up by other organizations; these plans should be referenced so they are easily referred to in the event of a catastrophe. Contingency plans will also address how implementation may change, or the specific processes to discuss change, in the event of significant ecological or financial changes.
3. **Operations:** A fundamental task of management plans is to explain how the managing entity proposes to implement its strategies to achieve its goals. This section of the plan should include realistic projections of the equipment and facilities needed for regional MPA management, and the number of staff and their respective qualifications.

It is not necessary that the Department provide all of the resources identified, as other sources may be found. However, the needs should be explicitly identified in order to guide the allocation of resources appropriately. Naturally, MPAs with different objectives will have different operations, and will have different stakeholder groups interested in the activities of an MPA. These groups can provide additional support.

- a. **Equipment and Facilities:** The management plan will identify the physical resources needed to accomplish its activities. This section of a plan should include specific details that will enable the quantification of needs. Many facilities and equipment needs may be addressed by existing resources and fulfill multiple goals.
- b. **Staffing:** Estimating how many people are expected to be involved in the implementation (short term) and management (long term) of the regional MPA network component is essential to projecting how much equipment to procure and how large facilities need to be. It also informs other considerations, such as how much training to anticipate.

Some tasks are non-delegable, and should only be undertaken by the Department. Other tasks can be filled by anyone capable of and interested in doing the job. For instance, scientific research may be most appropriately conducted by researchers from other institutions. For clarity's sake, the regional MPA management plan should specify which personnel needs are deemed Department staff only, and which can appropriately be conducted by others agencies, groups, or organizations.

- c. **Collaborations and Potential Partnerships:** The Department should maintain oversight of these activities to assure they are carried out appropriately by the entity to which the task is delegated. The regional MPA management plan should specify the potential reporting arrangements for collaborative efforts.

The plan should also identify which operational steps are deemed appropriate for collaborative partnerships. As constituents become more involved with MPA management activities, they may be interested in opportunities to assist in achieving

the strategies. By identifying in the management plan what tasks are appropriate for future collaborations, the plan helps focus collaborators attention to those needs.

4. *Costs and Funding:* This section converts the enumerated tactics into a quantified estimate of implementation costs.
 - a. Cost estimates: Management plans will identify local sources of funding for co-management arrangements, if any, and identify the costs not borne by outside collaborators that remain the Department's responsibility. This task may benefit from estimated implementation costs prepared by the MLPA Initiative staff and released in draft form to the public on April 20, 2006 (Appendix L).
 - b. Potential Funding Sources: Though full implementation will be contingent upon acquiring adequate funding, management plans will describe both identified funding and potential new sources of funding. The description of existing financial resources will allow the Department to recommend the implementation strategy and timeline. A report on options for funding the Marine Life Protection Act was provided by consultants to the MLPA Initiative (Appendix N). This report provides an overview of potential major funding sources. Additional funding may come from local sources, outside partners and federal and private grants. Information on funding is also provided in Section 7.
5. *Timelines and Milestones:* A regional MPA management plan is valuable as a roadmap to guide the steps to be taken in MPA implementation. As such, laying out the expected course of implementation at the outset frames the expectations to follow. Initially this will provide the detailed expectations and requirements needed prior to implementation. Once implementation has begun, milestones and a timeline also provide a framework for evaluating and reviewing the effectiveness of MPA management.

Deadlines estimated for achieving milestones should be general and not specific to calendar dates. This recognizes that the purpose of a timeline is not to set "drop-dead" target deadlines, but rather to document which actions necessarily come before other actions, and to realistically assess how long the actions will take to complete.

For the purposes of a regional MPA management plan, only major events in the implementation of the MPA's activities and when they are to occur should be detailed. More detailed schedules would be desirable for actual scheduling purposes, but are not appropriate in a management plan.

- a. Timeline and Criteria for Implementation: Based on the information above, the Department will provide a comprehensive analysis of the needs and timeline for implementation. Certain MPAs are necessarily more difficult to implement, either due to their remoteness from facilities and staff or from the complexity of their design and regulations. Additionally, certain MPAs will benefit from existing partnerships and facilities, while others may require completely new infrastructure and programs. The Department will recommend an implementation timeline for each MPA in a region. In most cases this timeline will not include specific implementation dates.

Implementation will be based on specific criteria in the form of funding, staff, and other resources.

- b. Timeline for Evaluation and Review of Effectiveness: Milestones are useless without a mechanism to revisit projections in light of actual experience. Regional MPA management plans will include annual review and long-term review. The annual review will allow fine-tuning expectations and addressing changed circumstances. Recognizing how actual conditions differ from expected conditions gives an opportunity to update the timeline so that partners can adjust their contributions. Also, assessing a plan's strengths and weakness in anticipating results of operations provides vital information about the planning process itself.

Prior to conducting a more comprehensive, long-term review, sufficient time must be provided for biological and other changes to occur and for the monitoring program to collect enough data to detect changes with statistical significance. Though some changes may be very rapid, most will take many years to accrue, especially given the biology of fish and invertebrate species. In order to allow the process of adaptive management to continue, however, review cannot be put off indefinitely. Thus, it is recommended that a major review of the program's results occur approximately 5 years after implementation.